

Serial No. 09/466,046

Docket No. 1232-4605**REMARKS**

Reconsideration in light of the foregoing amendments and following remarks is respectfully requested.

**Claim Status**

Claims 41-48 are pending and have been rejected. Claims 41-48 are herein amended and new claims 49-68 are herein added. No new matter has been added. Of these, claims, claims 41, 45, 51, 56, 61, 63, 65 and 67 are independent in form.

**Claim Rejections 35 U.S.C. § 102/103**

Claim 41 has been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,568,194 to Abe ("Abe"). Claim 42 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Abe in view of Japanese Patent Application Publication No. 62-023025 to Aihara ("Aihara"). Claims 43, 45, and 47 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Abe in view of US. Patent No. 5,808,681 to Kitajima ("Kitajima"). Claim 44 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Abe in view of Kitajima and further in view of Aihara. Claims 46 and 48 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Abe in view of Kitajima and further in view of U.S. Patent No. 4,811,086 to Hieda ("Hieda").

Applicant does not agree with the characterization of the claimed invention or the teachings attributed to the prior art references in the stated rejections and respectfully traverses these rejections. Applicant has nonetheless amended claims 41-48 to further clarify the claimed invention, and offers the following comments.

Abe discloses a white balance adjusting device that obtains white balance information; stores a first image that is captured without using a flash; stores a second image that

Serial No. 09/466,046

Docket No. 1232-4605

is captured using the flash; and then compares luminance values associated with the first and second images. When there is a large difference in luminance values, a white balance adjustment is performed based on light from the flash. When there is a small difference in luminance values, a white balance adjustment is performed based on ambient daylight. (See Abstract of Abe).

Abe discloses that a color temperature of light from the flash is constant and that white balance adjustment based on the light from the flash is performed using a first coefficient, which is stored in a white balance adjustment circuit 26. Col. 4, lines 29-33. Abe further discloses that a color temperature of ambient daylight varies and that white balance adjustment based on ambient light is performed using a second coefficient, which is generated by the white balance adjustment circuit 26 based on output from a white balance sensor 27. Col. 4, lines 33-40.

The image capture apparatus recited in claim 41 requires an image capture unit adapted to capture an image using an image pickup element; a switch adapted to instruct the image capture apparatus to start a recording process of recording a captured image in a recording unit; and a control unit adapted to control the recording process using a first exposure value indicating an exposure of an image captured before the switch is operated and a second exposure value indicating an exposure of an image captured after the switch is operated. (Emphasis added).

In Applicant's invention, an exposure control part 28 that controls a shutter 14 on the basis of light measurement information from a light measuring control part. See, e.g., Page 9, lines 1-5. Applicant's invention further includes a first shutter switch 41 ("SW1") that turns on when a shutter release button is in a half depressed state in a first, so as to give instructions

Serial No. 09/466,046

Docket No. 1232-4605

for starting, *inter alia*, an Automatic Exposure process. See, e.g., Page 12, line 26 to page 13, line 3. A second shutter switch ("SW2") turns on when an operation of the shutter release button is completed in a second stroke, so as to give instructions for starting operations of a series of processes such as, *inter alia*, a writing process for writing image data from a charge coupled device 15 into a main memory 19. See, e.g., Page 13, lines 4-10.

In the Automatic Exposure process, light measurement information is obtained from an electrical charge signal from a charge coupled device ("CCD") 15 that is converted into a digital value by an analog to digital converter 16; an image plane is divided into predetermined areas by an image processing circuit 21; and an integral value of image data in each of the predetermined areas is found to obtain a light measurement evaluation value. See, e.g., Page 25, line 23 – page 26, line 4. The light measurement evaluation values of the respective areas are weighted, and in consideration with the weight, a light measurement evaluation value for the whole image plane is obtained. See, e.g., Page 26, lines 4-8.

Referring now to FIG. 3 of the present application, in Step S20, a check is made to determine if the first shutter switch SW1 is depressed. If it is, the display is frozen in Step S22, and then a distance measuring process, a light measurement process, and a color measuring process are initiated in Step S23. Referring now to FIG. 5 for a description of these processes, a first exposure evaluation value is stored in Step S56, a first white balance evaluation value is stored in Step S59, and a first distance measurement evaluation value is stored in Step S63. Eventually, Step S30 in FIG. 4 is executed and a photo-taking process is initiated to capture image data. After the photo-taking process completes and the image data is optionally displayed, a recording process is undertaken in Step S35.

Serial No. 09/466,046

Docket No. 1232-4605

Referring now to FIG. 7 for a description of the recording process, in Step S91 a second exposure evaluation value, a second white balance evaluation value, and a second distance measurement evaluation value are computed for the captured image data and compared to the first exposure evaluation value, the first white balance evaluation value, and the first distance measurement evaluation, respectively. Then, in Step S92, predetermined evaluation reference values are set in accordance with photo-taking conditions stored in Step S63 in Fig. 5. Then in Step S93, it is determined whether the magnitudes of the differences between the first and second exposure evaluation values are less than the predetermined evaluation reference values. If the result of the determination in Step S93 is "Yes", the image data undergoes a pixel squaring process in Step S95, an image compression process in Step S96, and finally the modified image data is recorded in Step S97.

Applicant's invention is drawn to an image capture apparatus in which both exposure evaluation values and white balance values are used before and after a picture is stored to determine how captured image data is processed prior to recording. On the other hand, the white balance adjusting device disclosed by Abe simply uses white balance information. That is, the white balance adjusting device disclosed by Abe does not use exposure evaluation values. Applicant notes that the luminance values used by Abe are not exposure evaluation values. Moreover, all of the luminance values in Abe are based on images that are captured after a switch is operated.

Abe thus fails to disclose, teach, or suggest at least an image capture apparatus with a switch and "a control unit a control unit adapted to control the recording process using a first exposure value indicating an exposure of an image captured before the switch is operated and a second exposure value indicating an exposure of an image captured after the switch is

Serial No. 09/466,046

Docket No. 1232-4605

operated” as recited in independent claim 41. Applicant submits that the image capture apparatus recited in claim independent claim 41 defines patentable subject matter.

Claim 45 is directed to an image capture apparatus that requires an image capture unit adapted to capture an image using an image pickup element; a switch adapted to instruct the image capture apparatus to start to a recording process of recording a captured image in a recording unit; and a control unit adapted to control the recording process using a first white balance value indicating a white balance of an image captured before the switch is operated and a second white balance value indicating a white balance of an image captured after the switch is operated. (Emphasis added).

As discussed above, Abe discloses a white balance adjustment device with a white balance adjustment based on ambient light performed using a second coefficient, which is generated by the white balance adjustment circuit 26 based on output from a white balance sensor 27. Col. 4, lines 33-40. That is, Abe's second coefficient is not based on a captured image.

Referring now to FIG. 3 of Abe, in Step 101 white balance information of ambient daylight is obtained. In Step 102, an aperture value and shutter speed are calculated for use with an electronic flash. In Step 104, a first image is captured without using the flash. In Step 105, a first luminance signal  $Y_1$  is obtained from the first image and stored in a first image memory 21. In Step 106, a second image is capture using the flash. In Step 107, a second luminance signal  $Y_2$  and differential color signals  $Cb_2$  and  $Cr_2$  are obtained from the second image and stored in a second image memory 22.

In Step 108 the first luminance signal  $Y_1$  is read out from the first image memory 21 and is raster-block-converted by a raster-block conversion circuit 23. Similarly, the second

Serial No. 09/466,046

Docket No. 1232-4605

luminance signal  $Y_2$  and the differential color signals  $Cb_2$  and  $Cr_2$  are read out from the second image memory 22, and are raster-block-converted by a raster-block conversion circuit 25. In Step 109, the block number  $N$  is set to 1. In Step 110, the luminance signals  $BY_1(x,y)$  and  $BY_2(x,y)$  of the representative pixels  $(x,y)$  from the block of block number  $N$  are read from the first and second image memories 21 and 22. In Step 111, a value of a luminance comparing function  $L(x,y)$  is calculated as the difference between the first and second luminance signals  $BY_1(x,y)$  and  $BY_2(x,y)$ .

In Steps 112-116, coefficients  $Ab$  and  $Ar$  of a white balance adjustment are set based on the value of the luminance comparing function  $L(x,y)$ . In Step 117, white balance adjustment is performed for the block of block number  $N$  by using the coefficients  $Ab$  and  $Ar$  of the white balance adjustment obtained in Step 113, 115 or 116, so that the differential color signals  $BCb_3$  and  $BCr_3$  are generated. In Step 118, the second luminance signal  $BY_2$  and the differential color signals  $BCb_3$  and  $BCr_3$  are outputted to a data compression process circuit 28. In Step 119, the signals  $BY_2$ ,  $BCb_3$ , and  $BCr_3$  are compressed by the data compression circuit 28 and recorded in the recording medium  $M$ . This process continues for each block in the captured images.

Kitajima merely discloses that color temperature information may be obtained from an image signal transmitted from a charge coupled device. Using the teachings of Kitajima in Abe would require obtaining white balance information from charge coupled device 13 in Step 101 or alternatively obtaining white balance information in Step 105.

If the teachings of Kitajima were used in Abe to obtain white balance information in Step 101, a preliminary shutter opening and closing would likely be required to allow ambient daylight to reach the charge coupled device 13. Abe is silent as to any relationship between the

Serial No. 09/466,046

Docket No. 1232-4605

disclosed release switch and obtaining white balance information from white balance sensor 27. Further, the preliminary shutter opening and closing would need to be controlled by an additional or modified release switch. This modified configuration would consequently require another step in FIG. 3 before Step 100, which is similar to Step 103 in that it would determine if the additional or modified release switch is on. Thus, using the teaching of Kitajima in Step 101 of Abe would ostensibly change the principle of operation of Abe's invention. "If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious." MPEP §2143.01 at p. 2100-132 (Rev. 2, May 2004). Thus, Applicant respectfully submit this combination of Abe and Kitajima is improper and cannot be used as a basis for rejecting claim 45.

Even *assuming arguendo*, if the teachings of Kitajima were used in Abe to obtain white balance information in Step 105, this information would be obtained after the release switch is operated in Step 103. Claim 45 requires, *inter alia*, "a first white balance value indicating a white balance of an image captured before the switch is operated." Thus, this combination of Abe and Kitajima even if properly combined would not disclose, teach, or suggest the invention as recited in claim 45 and cannot be used as a basis for rejecting claim 45.

Based on at least the foregoing remarks, claim 45 is believed to define patentable subject matter.

Accordingly, Applicant believes independent claims 41 and 45 are not taught or suggested by, and are therefore neither anticipated by nor rendered obvious in view of, the art of record taken alone or in combination, for at least the reasons set forth hereinabove.

Serial No. 09/466,046

Docket No. 1232-4605

As claims 42-44 and 46-48 each dependent upon either independent claim 41 or 45, Applicant respectfully submits that these dependent claims are also allowable for at least similar reasons as the independent claims from which they depend. However, Applicant reserves the right to address the individual rejections of the dependent claims, should such be necessary and appropriate.

**New Claims 49-68**

Applicant has added new claims 49-68, including independent claims 51, 56, 61, 63, 65 and 67. New claims 49-68 are believed allowable for at least the following reasons.

New claims 49 and 50 depends from independent claims 41 and 45, respectively, and are believed to define patentable subject matter for at least similar reasons to those presented above for claims 41 and 45. Independent claims 51 and 56 are method claims corresponding to independent claims 41 and 45, respectively, and are believed to define patentable subject matter for at least similar reasons to those presented above for claims 41 and 45.

Regarding independent claims 61 and 63, neither Abe, Kitajima, Aihara, Hieda nor the other art of record, alone or in combination, disclose, teach, or suggest, either an image capture apparatus comprising "an image capture unit adapted to capture an image using an image pickup element; a switch adapted to instruct the image capture apparatus to start to a recording process of recording a captured image in a recording unit; wherein the image capture apparatus is capable of determining whether to issue a warning to a user or not using a first exposure value indicating an exposure of an image captured before the switch is operated and a second exposure value indicating an exposure of an image captured after the switch is operated" as recited in new independent claim 61, or, an image capture apparatus comprising "an image capture unit adapted to capture an image using an image pickup element; and a switch adapted to instruct the image



Serial No. 09/466,046

Docket No. 1232-4605

capture apparatus to start to a recording process of recording a captured image in a recording unit; wherein the image capture apparatus is capable of determining whether to issue a warning to a user or not using a first white balance value indicating a white balance of an image captured before the switch is operated and a second white balance value indicating a white balance of an image captured after the switch is operated" as recited in new independent claim 63.

Since new independent claims 65 and 67 are method claims corresponding to claims 61 and 63, respectively, they are believed to define patentable subjected matter for at least similar reasons.

New claims 52-55, 57-60, 62-64, and 66-68 ultimately depend from independent claims 51, 56, 61, and 65, respectively, and are believed to define patentable subject matter for at least similar reasons to those presented for claims 51, 56, 61 and 65.

### CONCLUSION

In view of the foregoing, Applicant submits that claim 41-68 as herein presented are allowable over the prior art of record, taken alone or in combination. Applicant further submits that the application is hereby placed in condition for allowance which action is earnestly solicited.

### AUTHORIZATION

No extension of time is believed necessary for the filing of this paper. However, should any additional fees be due or should an extension of time be required to render this filing timely, such is hereby petitioned, and the Commissioner is hereby authorized to charge any additional fees which may be required for the timely consideration of this Amendment, or credit any overpayment to Deposit Account No. 13-4500, Order No. 1232-4605.

Serial No. 09/466,046

Docket No. 1232-4605

In the event that a telephone conference would facilitate prosecution of the instant application, the Examiner is invited to contact the undersigned at the number provided.

Respectfully submitted,  
MORGAN & FINNEGAN, L.L.P.

Dated: March 17, 2005

By:

  
Stephen J. Manetta  
Registration No. 40,426

Correspondence Address:

MORGAN & FINNEGAN, L.L.P.  
3 World Financial Center  
New York, NY 10281-2101  
(212) 415-8700 Telephone  
(212) 415-8701 Facsimile